



## Cultural differences affecting euthanasia practice in Belgium: One law but different attitudes and practices in Flanders and Wallonia

Joachim Cohen <sup>a,\*</sup>, Yanna Van Wesemael <sup>a</sup>, Tinne Smets <sup>a</sup>, Johan Bilsen <sup>a,b</sup>, Luc Deliens <sup>a,c</sup>

<sup>a</sup> End-of Life Care Research Group, Ghent University and Vrije Universiteit Brussel, Laarbeeklaan 103, 1090 Brussels, Belgium

<sup>b</sup> Department of Public Health, Vrije Universiteit Brussel, Brussels, Belgium

<sup>c</sup> VU University Medical Center, Department of Public and Occupational Health, EMGO Institute for Health and Care Research, Expertise Center for Palliative Care, Amsterdam, The Netherlands

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### ABSTRACT

Since 2002, Belgium has had a national law legalising euthanasia. The law prescribes several substantive due care requirements and two procedural due care requirements, i.e. consultation with an independent physician and reporting of euthanasia to a Federal Control Committee. A large discrepancy in reporting rates between the Dutch-speaking (Flanders) and the French-speaking (Wallonia) parts of Belgium has led to speculation about cultural differences affecting the practice of euthanasia in both regions. Using Belgian data from the European Values Study conducted in 2008 among a representative sample of the general public and data from a large-scale mail questionnaire survey on euthanasia of 480 physicians from Flanders and 305 from Wallonia (conducted in 2009), this study presents empirical evidence of differences between both regions in attitudes towards and practice of euthanasia. Acceptance of euthanasia by the general population was found to be slightly higher in Flanders than in Wallonia. Compared with their Flemish counterparts, Walloon physicians held more negative attitudes towards performing euthanasia and towards the reporting obligation, less often labelled hypothetical cases correctly as euthanasia, and less often defined a case of euthanasia having to be reported. A higher proportion of Flemish physicians had received a euthanasia request since the introduction of the law. In cases of a euthanasia request, Walloon physicians consulted less often with an independent physician. Requests were more often granted in Flanders than in Wallonia (51% vs 38%), and performed euthanasia cases were more often reported (73% vs 58%). The study points out some significant differences between Flanders and Wallonia in practice, knowledge and attitudes regarding euthanasia and its legal requirements which are likely to explain the discrepancy between Wallonia and Flanders in the number of euthanasia cases reported. Cultural factors seem to play an important role in the practice of (legal) euthanasia and the extent to which legal safeguards are followed.

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### Introduction

Cultural differences can be an important factor explaining differences in the health behaviour of patients as well as of physicians (Kawamura, Honkala, Widstrom, & Komabayashi, 2000; Mitchell, 1998; Perkins, Geppert, Gonzales, Cortez, & Hazuda, 2002; Stromgren et al., 2004; Vincent, 2001). Physicians' compliance with health care guidelines or regulations is for instance susceptible to cultural values. Belgium makes an interesting case in

this respect. The country consists of two culturally different regions: Flanders, the northern Dutch-speaking part making up 56% of Belgium's population, and Wallonia, the southern French-speaking part (33% of Belgium's population), with the first historically more related to the Germanic culture within Europe and the latter more to the Latin culture within Europe. With the political crisis the country has been undergoing for several years in which the political representatives of its two major language communities are failing to achieve political unity, the perception about the significance of these cultural differences is peaking (Arnoudt, 2006; Reigrotski & Anderson, 1959). These stereotypical differences are a lot less pronounced in actual empirical research findings (Billiet, Maddens, & Frogner, 2006; Coffé, 2005; Dobbelaere, 2003).

In the medical field, particularly with regard to end-of-life care, differences between regions have been subject to speculation about

\* Corresponding author. Tel.: +32 2 4774714; fax: +32 2 4774711.

E-mail addresses: [jcohen@vub.ac.be](mailto:jcohen@vub.ac.be) (J. Cohen), [yvwesema@vub.ac.be](mailto:yvwesema@vub.ac.be) (Y. Van Wesemael), [tismets@vub.ac.be](mailto:tismets@vub.ac.be) (T. Smets), [johan.bilsen@vub.ac.be](mailto:johan.bilsen@vub.ac.be) (J. Bilsen), [luc.deliens@vub.ac.be](mailto:luc.deliens@vub.ac.be) (L. Deliens).

their relationship to differences between cultures (De Bondt, Englert, Herremans, Matthys, & Van Neste, 2008; Smets, Bilsen, Cohen, Rurup, & Deliens, 2010; Smets et al., 2011). This speculation is reinforced by the fact that, while various aspects of health care are a federal i.e. national matter, Wallonia and Flanders have autonomous responsibility for various organisational health care matters such as health promotion and prevention, aspects of care for older people, home care and coordination and collaboration in palliative care (Corens, 2007). The ministries of health of the different regions and communities decide on the amount of subsidy given to home care and services and to health promotion, prevention and education and they also supervise and regulate these matters.

In regard to the practice of euthanasia – which is legal in Belgium and subject to legal safeguards – there are particularly strong reasons to suspect cultural differences between Flanders and Wallonia. The euthanasia law in Belgium specifies several substantial due care criteria (e.g. unbearable suffering without prospect of improvement, explicit and repeated requests) which have to be met in order for euthanasia to take place as well as two procedural due care requirements: a second independent physician has to be consulted beforehand to evaluate whether the euthanasia request of the patient can be granted and, once performed, the euthanasia case has to be reported to the Federal Control and Evaluation Committee for Euthanasia (Smets et al., 2008). It has been found that only 17% of the euthanasia cases reported to the Committee had come from French-speaking physicians (Smets et al., 2010). While some have concluded from this that euthanasia is actually a much more frequent practice in Flanders, it is also often assumed that this very large difference does not, in fact, reflect a very large difference in actual practice but rather a reluctance to report euthanasia cases. However, other studies indicate a tendency towards more performance of euthanasia by Flemish (Dutch-speaking) physicians and more continuous deep sedation by French-speaking physicians (Chambaere, Bilsen, Cohen, Raman, & Deliens, 2010; Van den Block et al., 2009). Patients in the French-speaking community also receive life-prolonging treatment more often (Van den Block et al., 2009). While the statistical power of some of these studies is insufficient to warrant strong conclusions, they seem to suggest that differences in reporting rates may indeed be due partly to actual differences in the extent to which euthanasia is performed.

It seems interesting, however, to also examine whether different attitudes and approaches between Dutch- and French-speaking physicians exist towards the procedural due care criteria included in the law, such as the mandatory requirement beforehand to involve a second independent consulting physician to ascertain that the substantial due care criteria are met (e.g. request etc), and the mandatory requirement afterwards to report a case of euthanasia to the Committee. The legalisation of euthanasia in 2002 was particularly endorsed in Flanders, which can – speculatively – be attributed to the fact that the Flemish are culturally closer to the Germanic culture of the Dutch making it easier to adopt a similar legalisation. Examining differences in practices and attitudes regarding euthanasia and the euthanasia law between Flanders and Wallonia could therefore also provide useful insights into the question to what extent euthanasia legalisation is culturally transferable.

This article tries to present empirical evidence from several data collections concerning differences in attitudes to and practice of euthanasia. It will address the following questions:

- 1) do attitudes towards euthanasia in the general population differ between Wallonia and Flanders?
- 2) do attitudes towards euthanasia and towards the procedural due care requirements of the euthanasia law differ between physicians from Wallonia and Flanders?

- 3) do Walloon physicians receive fewer euthanasia requests from their patients?
- 4) do Flemish and Walloon physicians deal differently with euthanasia requests, and if they grant a request do they respect the procedural due care requirements (i.e. consulting an independent second physician and reporting the euthanasia case) differently?
- 5) do Walloon and Flemish physicians have a different understanding of euthanasia and of the obligation to report?

## Methods

### Study design

#### *European Values Study (research question 1)*

Two data sources were used to answer the research questions. To answer the first research question the 2008 Belgian data of the European Values Study were used. This is a large-scale survey held in 2008 in 47 European countries. In each country, a representative multistage or stratified random sample of the adult population 18 years and older was approached for face-to-face interviewing. More detailed information on the scope of the survey, the selection procedure and data collection procedure can be found elsewhere (Cohen et al., 2006a; Halman, 2001). The questionnaire used in the survey includes several questions about respondents' sociodemographic background, their religious values and orientations and several of their attitudes. One question asks about the respondent's acceptance of euthanasia: 'please tell me whether you think euthanasia (terminating the life of the incurably sick) can always be justified, never be justified, or something in between', after which the respondent is asked to answer on a rating scale from 1 to 10. For the purpose of this article we used only the data collected in Belgium and made a distinction between the respondents from Flanders and those from Wallonia.

#### *Physician survey (research question 2–5)*

To answer the second to the fifth research questions, we used data collected through a large-scale physician survey in Belgium. In March 2009, a mail questionnaire was sent to a sample of 3006 registered medical practitioners working in Belgium, who had graduated in their specialty at least 12 months before the sample was drawn and who, on the basis of their specialty, were likely to be involved in the care of dying patients. As such, a representative sample was drawn from all general practitioners, anaesthesiologists, gynaecologists, internists, neurologists, pulmonologists, gastroenterologists, psychiatrists and neuropsychiatrists, cardiologists, radiotherapists, and surgeons. The sample was proportionally stratified for province and specialty. The sampled physicians received a questionnaire with a unique serial number and were instructed in a covering letter to send it when complete to an independent lawyer, in order to guarantee complete anonymity while allowing for the sending of up to three reminders. The anonymity procedure and study protocol were approved by the Ethical Review Board of the University Hospital of the Vrije Universiteit Brussel. More information about the design, mailing procedure and the non-response survey conducted can be found elsewhere (Smets et al., 2011).

A pre-structured, eight-page questionnaire was developed in Flemish and a forward and backward translation into French was made for use in the French-speaking part of Belgium. The questionnaire was tested with 10 physicians who were experts in palliative care, using cognitive testing. The physicians suggested improved and unambiguous question wording, layout, and routing. Euthanasia was defined in the questionnaire, according to the Belgian legal definition, as 'intentionally ending the patient's life at

his/her explicit request, by the physician'. The questionnaire first assessed the attitudes of physicians towards euthanasia and other end-of-life decisions and towards the euthanasia law and the legal due care criteria of the law. Agreement with each statement was measured on a 5-point Likert scale (strongly agree, agree, neutral, disagree, and strongly disagree). Additionally, a module of the questionnaire asked whether the physicians had ever received a request for euthanasia during their career, the number of euthanasia requests they had received in the last two years, for how many of these they had consulted a second physician, how many of these were granted, and how many were officially reported to the Federal Control and Evaluation Committee for Euthanasia. Concerning their most recent euthanasia request, physicians were asked about their initial position towards the request (i.e. whether they intended to grant the request when the patient first made it), whether they had consulted a second physician, whether the request was granted, and, if so, whether the euthanasia was officially reported.

The questionnaire also presented the physicians with five hypothetical cases of a patient in the final stage of a terminal illness, who was suffering severely. In each case, we varied whether or not the patient explicitly requested life-ending, the drugs administered to the patient, the mode of administration and the effect of the administration of the act. For each case we asked the physician which label best described the act (euthanasia, palliative/terminal sedation, life-ending without explicit request, intensification of pain and symptom treatment, other), whether they thought it conceivable that they would perform a similar act themselves, whether the act had to be reported to the Federal Control and Evaluation Committee for Euthanasia and whether they would report the act themselves in cases where they had performed it. More details about the cases can be found elsewhere (Smets et al., 2011). Questions on sex, age, religion, number of years of practice, number of patients cared for in their terminal phase during the past year and training in end-of-life care were also incorporated into the questionnaire.

To assess non-response bias, non-responders were sent a one-page form, asking them for their reasons for not participating and requesting them to fill in two key questions from the original questionnaire: one about their attitude to euthanasia, and the other whether they had ever received a request for euthanasia.

### Statistical analysis

A weighting factor was used to correct for differences in non-response between Flanders and Wallonia. All presented percentages are weighted for this weighting factor. Univariate and bivariate statistics were used to describe differences between physicians from Flanders and Wallonia. Pearson Chi square tests (for differences in proportions) and one-way ANOVA tests (for differences in means) were used to test for statistically significant differences between Flanders and Wallonia. In order to examine whether the observed bivariate differences between Flanders and Wallonia were not confounded by differences in characteristics between both, multivariate ordinal regressions (PLUM) were performed for the attitudes and multivariate binary logistic regression analyses for the binomial categorical dependent variables for which significant differences were found in the bivariate analyses.

## Results

### Attitudes of the general public

The European Values Survey 2008 surveyed a total of 791 people from Flanders and 591 from Wallonia. The mean score of acceptance of euthanasia was slightly but statistically significantly higher

in Flanders (6.96; 95% CI: 6.78–7.13) than in Wallonia (6.61; 95% CI: 6.40–6.83) (one-way ANOVA test,  $p = 0.015$ ). An analysis of covariance (ANCOVA) showed that this difference could not be accounted for by the slightly higher degree of religiosity found in Wallonia or other sociodemographic characteristics such as age, gender, and level of attained education.

### Attitudes of physicians

The physician survey, conducted nationwide in 2009 in Belgium, obtained responses from 480 physicians from Flanders (response rate 31%) and 305 from Wallonia (response rate 29%). Comparison of responders and non-responders showed no non-response bias in terms of specialty and province in Flanders. However, in Wallonia, family physicians and physicians from Liege province were significantly underrepresented. Responding physicians and physicians responding to the non-response survey did not significantly differ in terms of whether they ever received a euthanasia request. In Flanders no significant differences were found in terms of acceptance of euthanasia in terminally ill patients; in Wallonia non-responders were slightly but significantly less accepting (80% vs 87% accepting). Comparison of the sociodemographic characteristics of the physicians from Flanders and Wallonia in the sample showed no significant differences between both, except that physicians in Wallonia were more often hospital specialists and more often older than 60 (Table 2).

Flemish and Walloon physicians differed in their attitudes towards euthanasia in general: Walloon physicians were more often in no circumstances prepared to administer lethal drugs, would more often rather perform sedation than administer lethal drugs, more often agreed that good palliative care prevents most requests for euthanasia, more often agreed that a physician should always strive to preserve life and less often agreed that euthanasia can be a part of good end-of-life care (Table 3). Although these significant differences were found, the proportion of both Flemish and Walloon physicians that held positive attitudes towards end-of-life decisions such as the administration of life-ending drugs at the explicit request of a terminally ill patient (92% vs 87% agreeing respectively) and towards the statement that euthanasia can be a part of good end-of-life care (82% vs 65% respectively) was high. The proportion agreeing to the statement that physicians should strive to preserve life in all circumstances (8% vs 15%) and to the statement that they were in no circumstances prepared to administer lethal drugs (15% vs 26%) is relatively low. Almost half of the Flemish physicians and about 60% of their Walloon counterparts indicated that they would rather perform sedation than administer lethal drugs. About half of physicians in both regions agreed that good palliative care prevents most requests for euthanasia.

In terms of attitudes towards the existing euthanasia law, Walloon physicians significantly more often believed that it has hindered the further development of palliative care than did Flemish physicians (12% vs 9% respectively), but also less often indicated themselves to be sufficiently informed about the existing law (38% vs 48% respectively). Flemish physicians (52%) more often than Walloon physicians (43%) felt that the existing law should be changed to include minors. In terms of attitudes towards the due care criteria of the law, Walloon physicians were less favourable than Flemish physicians towards the reporting obligation (i.e. 38% of Walloon vs 20% of Flemish physicians believed that euthanasia was a matter between physician and patient with which a reporting committee has no concern and less often felt that reporting contributed to more careful practice) and towards the obligation to consult a second physician (i.e. 55% of Walloon vs 71% of Flemish physicians believed consulting a second physician in the case of a euthanasia request was useful and less often felt it contributed to more careful practice).

**Table 1**

Comparison of responding and non-responding physicians in Flanders and Wallonia.

	Flanders			Wallonia		
	Responders	Non-responders	p-Value	Responders	Non-responders	p-Value
Specialty						
Family medicine (GP)	66.6	67.9	0.579	57.3	66.7	0.007
(Hospital) medical specialist	33.4	32.1	0.579	42.6	33.4	0.007
Province						
Antwerp	27.6	25.2	0.293	/	/	/
Limburg	12.1	10.7	0.412	/	/	/
East Flanders	20.5	22.4	0.369	/	/	/
Flemish Brabant	21.9	25.6	0.107	/	/	/
West Flanders	17.8	15.9	0.355	/	/	/
Hainaut	/	/	/	32.3	29.0	0.318
Liege	/	/	/	27.7	36.0	0.014
Luxemburg	/	/	/	5.4	6.1	0.685
Namur	/	/	/	15.7	13.7	0.427
Walloon Brabant	/	/	/	18.8	15.1	0.159
Ever received euthanasia request	50.9	52.7 <sup>b</sup>	0.646	42.8	39.8 <sup>b</sup>	0.514
Acceptance of euthanasia <sup>a</sup>	92.3	89.1 <sup>b</sup>	0.150	86.9	80.3 <sup>b</sup>	0.008

<sup>a</sup> Percentage of physicians totally agreeing or agreeing to the statement that “administration of life-ending drugs at the explicit request of a patient is acceptable for those with a terminal disease with extreme uncontrollable pain or other uncontrollable suffering”.

<sup>b</sup> Based on the non-response survey. 583 Replied to the non-response survey (31%).

### Receiving euthanasia requests

The proportion of physicians who had received a euthanasia request in Wallonia and Flanders did not differ significantly.

**Table 2**

Description of the responding physicians in Flanders and Wallonia.

	Flanders	Wallonia	p-Value <sup>a</sup>
Total number (unweighted)	480	305	/
Specialty			
Family medicine (GP)	66.6	57.4	<b>0.010</b>
(Hospital) medical specialist	33.4	42.6	
Training in palliative care			
No palliative care training	46.1	50.3	0.188
Palliative care training	47.4	41.2	
Palliative care training and member of a palliative care team	6.5	8.5	
Age			
<36	12.5	11.6	<b>0.034</b>
36–50	37.5	36.7	
51–60	37.5	31.6	
>60	12.5	20.1	
Sex			
Man	35.0	36.1	0.759
Woman	65.0	63.9	
Religious denomination			
Catholic	50.0	50.0	0.182
Protestant	0.6	2.0	
Other religion/life stance	6.3	7.4	
Religious but no specific denomination	11.1	8.7	
Humanist	14.5	18.8	
Not religious, no specific life stance	17.4	13.1	
Number of dying patients cared for in the last year			
0	22.3	24.1	0.772
1–10	64.9	62.2	
>10	12.8	13.7	

<sup>a</sup> Pearson chi square.

However, a significantly higher proportion of Flemish physicians had received a euthanasia request from one or more of their patients since the introduction of the euthanasia law (Table 4).

### Handling euthanasia requests

Walloon physicians had been initially positive towards granting the most recent request they had received since legalisation no less often than had Flemish ones; they had less often consulted a second physician. In those cases in which a second physician had been consulted an equal proportion in Flanders and Wallonia judged the due care criteria to have been met and the case to qualify for euthanasia and in an equal proportion of these the euthanasia had been carried out (Table 4). However, of all euthanasia requests (not only those where a second physician was consulted) a higher proportion eventually resulted in euthanasia in Flanders compared with Wallonia. The large range for the number of granted request in Flanders was due to one outlier carrying out 40 euthanasia cases in the past two years. Without that outlier, the range is 0–5. Respectively 41 physicians in Flanders and 17 in Wallonia carried out one euthanasia case, 14 and 5 carried out two, and 6 and 2 carried out 3 in the past two years. Additionally, in Flanders five physicians carried out four cases and one physician carried out five. Of all performed euthanasia cases 73% of Flemish and 58% of Walloon physicians indicated having officially reported the case to the Federal Control and Evaluation Committee for Euthanasia.

### Labelling and reporting of hypothetical cases

Five hypothetical cases of end-of-life decisions were presented to all physicians: a case of palliative sedation, a case of life-ending of a non-competent patient without there being an explicit request by the patient, a case of euthanasia performed with neuromuscular relaxants, a case of intensified pain and symptom alleviation and a case of euthanasia performed with opiates. No significant differences between Flemish and Walloon physicians were found in the proportion responding that they can envisage themselves practicing each of these (Table 5). Walloon physicians significantly less often thought the euthanasia case performed with neuromuscular relaxants needed to be officially reported as a euthanasia case, but on the other hand significantly more often thought the palliative sedation case and the case of life-ending without an explicit patient request needed to be officially reported as euthanasia. These



**Table 3**  
Attitudes of physicians towards euthanasia in Flanders (*n* = 480) and Wallonia (*n* = 305).

	Flanders	Wallonia	<i>p</i> -Value <sup>a</sup>
<b>General attitudes towards end-of-life decisions</b>			
Everyone has the right to decide about their life and death	70.3	74.3	0.214
The administration of life-ending drugs at the explicit request of a patient is acceptable for patients with a terminal disease with extreme uncontrollable pain or other uncontrollable suffering.	92.3	86.9	0.141
If a terminally ill patient suffers unbearably and is not capable of making decisions on their own, the physician (together with the team of caregivers) should be able to decide to administer life-ending drugs.	55.0	62.0	0.223
I am in no circumstances prepared to administer drugs to hasten death at the explicit request of a patient.	<b>15.0</b>	<b>25.9</b>	<b>&lt;0.001</b>
Sufficient availability of palliative care prevents almost all requests for life-ending	<b>49.6</b>	<b>51.8</b>	<b>0.018</b>
Life-ending on request can be part of good end-of-life care	<b>81.8</b>	<b>64.5</b>	<b>&lt;0.001</b>
I am more willing to perform continuous deep sedation on request than to administer life-ending drugs on request	<b>47.7</b>	<b>59.4</b>	<b>&lt;0.001</b>
If necessary, I would administer pain medication, even if this medication would hasten the patient's death	96.1	96.8	0.162
In all circumstances, physicians should strive to preserve the life of their patients, even if patients ask to hasten their death	<b>8.0</b>	<b>14.8</b>	<b>&lt;0.001</b>
<b>Attitudes towards the existing euthanasia law</b>			
Euthanasia should be legal for minors who can value their interests	<b>51.6</b>	<b>43.3</b>	<b>0.003</b>
Euthanasia should be legal for patients who have become incompetent (e.g. due to dementia) when they have an advance directive	81.8	74.1	0.406
The euthanasia law contributes to the carefulness of physicians' medical behaviour at the end of life.	68.6	61.5	0.168
The euthanasia law impedes the further development of palliative care.	<b>8.8</b>	<b>11.9</b>	<b>0.030</b>
I am sufficiently informed about the content of the euthanasia law	<b>48.9</b>	<b>37.6</b>	<b>0.004</b>
<b>Attitudes towards the legal procedural safeguards</b>			
Attitudes regarding consultation of second physician			
Consulting with a second physician is useful in every case of euthanasia request	<b>85.2</b>	<b>76.5</b>	<b>0.031</b>
In order to give an advice as second physician in a euthanasia request, one has to have followed a special training	53.8	55.6	0.503
Consulting a second physician contributes to the careful practice at the end of life	<b>85.9</b>	<b>72.3</b>	<b>&lt;0.001</b>
Attitudes regarding societal control			
Euthanasia is a private matter between patient and physician that does not need to be controlled by the Control and Evaluation Committee.	<b>19.6</b>	<b>37.5</b>	<b>&lt;0.001</b>
Societal control over the euthanasia practice is necessary.	71.3	65.6	0.336
Reporting euthanasia cases contributes to the carefulness of physicians' medical behaviour at the end of life.	<b>71.0</b>	<b>54.7</b>	<b>&lt;0.001</b>

Presented percentages are the percentage answering agree or strongly agree to the statement.

<sup>a</sup> *p*-Values: Jockheere–Terpstra test testing differences in rank between Flanders and Wallonia. [A multivariate ordinal regression (PLUM) was performed to examine whether bivariate significant differences between Flanders and Wallonia were due to differences in characteristics of Flemish and Walloon physicians (cfr Table 1). Controlling for these characteristics, however, all differences remained significant.]

differences are also reflected in the proportion that would actually report the case. The euthanasia case with muscular relaxants and the palliative sedation case were more often correctly labelled by the Flemish physicians than they were by the Walloon physicians. In a multivariate logistic regression analysis, the lower actual reporting intention of Walloon physicians for the euthanasia case with muscular relaxants could not be explained entirely by their more frequently incorrect labelling of the case (not in table).

## Discussion

This study indicates some important cultural differences in terms of attitudes to and practice of euthanasia in Belgium between the Dutch-speaking region of Flanders and the French-speaking region of Wallonia. The acceptance of the practice of euthanasia was not very different between both regions, both in the general public and among physicians, with a somewhat higher acceptance found in Flanders. However, larger differences emerged in the proportion of physicians receiving a euthanasia request since legalisation (a larger proportion of physicians did so in Flanders) and in particular in the attitudes and actual practices regarding the due care criteria of the law. Flemish physicians appeared to have a better notion of euthanasia and the legal obligations of the

euthanasia law, and Walloon physicians were both more reluctant and less inclined to consult a second physician and officially report the case as euthanasia.

This study is the first to allow a systematic comparison between Flanders and Wallonia in terms of attitudes towards and practice of euthanasia. In doing so it sheds light over a fierce and long ongoing discussion that has hitherto been merely speculative. The strengths and limitations of the European Values Study have been extensively documented elsewhere (Cohen et al., 2006a, 2006b). Its most important limitation is perhaps that the description of euthanasia does not conform to the legal definition in Belgium that was used in the physician survey. The physician survey used for this study comprised a representative sample of physicians in Flanders and Wallonia who were potentially involved in the care of dying patients. In using descriptive questions instead of value-laden terms, attitudes and practices with regard to euthanasia could be examined in a neutral way avoiding confusion. Thorough forward–backward translation and cognitive testing of the questionnaires minimizes differences in interpretation of questions between Flemish and Walloon physicians, although cultural differences in interpretation of terms and descriptions cannot be ruled out. Further limitations include a low response percentage in both regions, making it difficult to generalise the results to all

**Table 4**  
Receiving and handling euthanasia requests in Flanders and Wallonia.

	Flanders (n = 480)	Wallonia (n = 305)	p-Value
Ever received request (%)	50.9	42.8	0.084 <sup>a</sup>
Average number of requests last 24 months (range)	0.72 (0–50)	0.70 (0–25)	0.874 <sup>b</sup>
Average number of requests for which second physician was consulted last 24 months (range)	<b>0.52 (0–50)</b>	<b>0.21 (0–6)</b>	<b>0.029<sup>b</sup></b>
Average number performed euthanasia cases last 24 months (range)	0.29 (0–40) <sup>c</sup>	0.13 (0–3)	0.133 <sup>b</sup>
Average number euthanasia cases reported last 24 months (range)	0.24 (0–40)	0.08 (0–3)	0.129 <sup>b</sup>
Received a request since euthanasia law; percentage of total (number)	<b>44.0 (149)</b>	<b>34.7(79)</b>	<b>0.012<sup>a</sup></b>
↓	↓	↓	
Initial reaction: (probably) not grant request	22.6	25.3	0.738
Consulted second physician regarding request	<b>73.0</b>	<b>50.0</b>	<b>0.001</b>
↓	↓	↓	
Second physician judged case to qualify for euthanasia	75.7	76.3	0.979
↓	↓	↓	
Euthanasia performed	78.5	79.1	0.999
Percentage euthanasia performed of all requests since euthanasia law	<b>51.2</b>	<b>37.9</b>	<b>0.035</b>
↓	↓	↓	
Euthanasia officially reported to Committee	73.1	57.9	0.102

<sup>a</sup> Pearson chi<sup>2</sup> testing differences in distribution between Flanders and Wallonia.

<sup>b</sup> Student *t*-test testing differences in mean between Flanders and Wallonia.

<sup>c</sup> One physician in Flanders reported having performed 40 euthanasia cases. Without this outlier, the average number of performed cases for Flanders is 0.21 (range 0–5); the average number of reported cases 0.16 (range 0–5).

physicians, and a possible recall bias, particularly for the description of the requests from more than a year earlier. With the relatively high non-response, it cannot be ruled out that in particular physicians who have performed acts not meeting the due care criteria (e.g. not reporting their actions to the Control and Evaluation Committee) have been reluctant to respond to the questionnaire, despite the thorough anonymity procedure, either for lack of trust in that procedure or simply for feeling uncomfortable with their own actions. While the non-response survey has indicated that, in both regions, there is no major non-response bias in terms of whether physicians ever received a euthanasia request and in terms of general attitudes towards euthanasia, we could evidently not assess a possible bias in terms of non-conforming to due care criteria.

The results of our study refute some of the speculations as to differences in attitudes and practices regarding euthanasia between Flanders and Wallonia and confirm others. Our study did not find any large differences between the regions in terms of the acceptance by the general public or by physicians of euthanasia as an option for suffering and incurable people, which was high in both regions, but did find a higher reluctance among Walloon physicians to actually perform it. While the difference in public acceptance of euthanasia between Flanders and Wallonia is small, significantly more Flemish physicians have been confronted with euthanasia requests since the euthanasia law was adopted. The latter is unlikely to be the result of a difference in attitudes towards euthanasia. It can perhaps speculatively be attributed to certain dynamics of the patient–physician trust relationship. It may be that Walloon physicians were not asked for euthanasia as often as Flemish physicians because patients quickly discern what they are “permitted” to ask from their physician within their trust relationship. As our data showed Walloon physicians to have a higher

reluctance to actually perform euthanasia, patients may not ask for it, assuming that it would not be acceptable to the physician and it would possibly put tension on their trust relationship. This mechanism would also explain the finding in previous research that religious physicians received requests for euthanasia from patients less often than non religious ones (Van Wesemael et al., 2011). The extent to which the general public and physicians have been informed and are aware of the existing euthanasia regulations might also play a role in this; Walloon physicians in our survey more often indicated that they were not sufficiently informed about the euthanasia law. Dissemination of information about euthanasia probably occurs more often in Flanders due to the existence, since 2003, of the Life End Information Forum (LEIF) which aims to inform and train physicians in end-of-life care issues and particularly in the due care requirements and practice of the euthanasia law (Van Wesemael, Cohen, Onwuteaka-Philipsen, Bilsen, & Deliëns, 2009). Also, with separate media whose content is fundamentally directed towards viewers within the own regions, coverage regarding euthanasia seems to have been more prevalent in Flanders than in Wallonia (Van den Bulck & Van Poecke, 1996). Over the past years, the topic has received frequent attention in the northern part of the country in the form of documentaries, news coverage about famous Flemish people receiving euthanasia, and coverage of the extensive research conducted on euthanasia in Flanders (Van den Bulck & Van Poecke, 1996).

Physicians in Flanders and Wallonia largely accept the use of lethal drugs in a patient who is suffering severely (respectively 92% and 87%). However, when it comes to attitudes towards actually performing an act of euthanasia, Walloon physician significantly more often indicate that they would never perform euthanasia themselves, more often indicate that they would rather perform sedation than euthanasia and also more often indicate that it is

**Table 5**Labelling of and assessing hypothetical cases by physicians in Flanders ( $n = 480$ ) and Wallonia ( $n = 305$ ).

	Case 1 (sedation)		Case 2 (life-ending without request)		Case 3 (euthanasia with neuromuscular relaxant)		Case 4 (intensified pain alleviation)		Case 5 (euthanasia with opiates)	
	Fla	Wall	Fla	Wall	Fla	Wall	Fla	Wall	Fla	Wall
Would ever practice?										
Yes	77.7	80.8	82.6	80.6	57.1	53.8	88.5	86.3	73.9	78.3
Needs to be reported legally?										
No	<b>66.9</b>	<b>60.8</b>	<b>61.7</b>	<b>58.7</b>	<b>6.5</b>	<b>23.6</b>	71.3	69.0	56.8	57.1
Yes	<b>9.0</b>	<b>16.0</b>	<b>10.9</b>	<b>17.7</b>	<b>85.6</b>	<b>59.9</b>	10.3	14.1	19.3	21.3
Don't know	<b>24.1</b>	<b>23.3</b>	<b>27.4</b>	<b>23.6</b>	<b>8.0</b>	<b>16.5</b>	18.3	16.9	23.9	21.6
Would actually report										
Yes	<b>12.1</b>	<b>21.1</b>	<b>14.6</b>	<b>20.7</b>	<b>83.7</b>	<b>62.1</b>	14.1	18.1	23.5	26.3
Labelling										
Palliative/terminal sedation	<b>84.4<sup>a</sup></b>	<b>69.6<sup>a</sup></b>	31.7	30.2	<b>5.4</b>	<b>13.6</b>	21.5	27.1	36.3	37.3
Life-ending without explicit patient request	<b>1.4</b>	<b>2.8</b>	17.1 <sup>a</sup>	16.3 <sup>a</sup>	<b>2.6</b>	<b>4.2</b>	0.9	1.4	1.3	2.5
Euthanasia	<b>0.0</b>	<b>0.0</b>	3.9	7.6	<b>88.6<sup>a</sup></b>	<b>70.4<sup>a</sup></b>	9.5	11.3	17.8 <sup>a</sup>	21.1 <sup>a</sup>
Pain and symptom alleviation with possible life-shortening effect	<b>10.9</b>	<b>20.6</b>	45.0	40.6	<b>1.9</b>	<b>9.1</b>	66.0 <sup>a</sup>	59.1 <sup>a</sup>	40.9	34.9
Other	<b>3.4</b>	<b>7.1</b>	2.4	5.2	<b>1.5</b>	<b>2.8</b>	2.2	1.0	3.7	4.3

Bold and underlined: statistically significant ( $p < 0.05$ ) difference between Flanders and Wallonia (tested with Pearson  $\chi^2$ ).**Case description:****Case 1 Palliative/terminal sedation.**

Patient is 73 years old and has an inoperable oesophageal carcinoma with extensive metastasis. Patient is weary and has pain over the whole body. Patient has only a few more days to live. A morphine pump alleviates the pain insufficiently. Patient has several times explicitly requested the physician to end his/her life. It is decided to administer midazolam until death and to forgo fluids and nutrition. Patient soon becomes comatose and dies three days after midazolam was started.

**Case 2 Life-ending without patient request.**

Patient is 73 year old and has an inoperable oesophageal carcinoma with extensive metastasis. Patient is unconscious and can no longer communicate, but suffers obviously. Patient has only a few more days to live. Patient's suffering can hardly be kept under control with a morphine pump and the family can no longer bear to watch the suffering. It is decided to administer morphine via infusion. The dose is doubled every 12 h. In addition, valium is added to the infusion. Patient dies 24 h after the infusion is started.

**Case 3 Euthanasia 1: using a neuromuscular relaxant.**

Patient is 73 year old and has an inoperable oesophageal carcinoma with extensive metastasis. Patient is weary and has pain over the whole body. Patient has only a few more days to live. A morphine pump alleviates the pain insufficiently. Patient has several times explicitly requested the physician to end his/her life. At an agreed timing the physician administers a sleep-inducing drug and subsequently a neuromuscular relaxant. Patient dies minutes after administration of the neuromuscular relaxant.

**Case 4 Intensified pain alleviation.**

Patient is 73 years old and has an inoperable oesophageal carcinoma with extensive metastasis. Patient is weary and has pain over the whole body. Patient has only a few more days to live. Patient's pain is treated with morphine patches, but they alleviate insufficiently. Patient has several times explicitly requested the physician to end his/her life. It is decided to administer morphine via a pump. The dose is gradually and proportionally raised. Patient dies 10 h after the morphine pump was started.

**Case 5 Euthanasia 2: using morphine.**

Patient is 73 year old and has an inoperable oesophageal carcinoma with extensive metastasis. Patient is weary and has pain over the whole body. Patient has only a few more days to live. Patient has several times explicitly requested the physician to end his/her life. It is decided to administer morphine via infusion. The dose is doubled every 12 h. In addition, valium is added to the infusion. Patient dies 24 h after the infusion is started.

<sup>a</sup> Correct label.

a physician's duty always to preserve life. Interestingly, they also less often feel that euthanasia can form a part of good end-of-life care. These differences in attitudes towards performing euthanasia are also reflected in the fact that 38% of Walloon physicians receiving a request since the euthanasia law was passed, as compared with 51% of their Flemish counterparts, had granted the most recent euthanasia request they received. The lower proportion of physicians receiving a euthanasia request, and the lower proportion of those who received a request actually granting it, indicates that the low fraction of all reported euthanasia cases in Belgium coming from French-speaking physicians is actually to a considerable extent due to differences in the practice of euthanasia and not merely the result of a lower reporting rate.

Differences between Walloon and Flemish physicians were also, however, particularly large regarding attitudes towards the prevailing law and attitudes and actual practices regarding the due care criteria specified in the law. Walloon physicians indicated less often than their Flemish counterparts that consulting a second physician in the case of a euthanasia request was useful and considerably less often felt it would contribute to careful practice. These attitudes also translated in the way they handled euthanasia requests by their patients: only half of the Walloon physicians as compared with 73% of the Flemish physicians consulted a second

physician in the case of a request. The absence of a service like LEIF – providing for specially trained physicians for euthanasia consultations – in Wallonia at the time of the study might account for the low consultation rate. It is interesting to note that when a second physician was consulted the content and outcome of this consultation process was very similar in both regions. In terms of the reporting obligation, the other procedural due care requirement of the euthanasia law, Walloon physicians indicated considerably more often than their Flemish counterparts that euthanasia was a matter between patient and physician in which a Control and Evaluation Committee need not interfere and considerably less often agreed that the reporting requirement contributes to more careful practice. As noted by others, it thus seems that culturally determined attitudes towards legal evaluation of medical practices differ between the two regions (Smets et al., 2011; Van den Block et al., 2009). Again, these attitudes also translate into a somewhat lower actual reporting rate. In addition to these different attitudes towards the usefulness of reporting euthanasia cases, Walloon physicians also clearly seemed to have less understanding of which of the hypothetical cases needed to be reported and which did not, and the level of understanding did not seem to be entirely due to the lower level of accuracy in correctly labelling a case as euthanasia.

Culturally, Flanders might lean more towards the Netherlands regarding, among other things, the need to regulate matters and follow rules (Hofstede, 2001). This would explain why Flemish physicians have in particular a more positive attitude towards the legal due care requirements than do Walloon physicians. The passing of the euthanasia law in 2002 was particularly largely endorsed in Flanders, and the law was very much modelled on the law in the Netherlands. Our results regarding differences in the extent to which the law is accepted and the legal safeguards followed indicate that there may be some issues concerning cultural transfer of the legalisation of euthanasia.

Apart from important regional and cultural differences in Belgian euthanasia practice, some more general discussion points emerge from the data. While support for euthanasia legalisation among physicians is usually limited in many countries (Grassi, Magnani, & Ercolani, 1999; Lee, Price, Rayner, & Hotopf, 2009; Seale, 2009), a very high proportion of physicians in both Wallonia and Flanders accept euthanasia as an option for at least some patients, and a majority can imagine circumstances in which they would perform euthanasia. The acceptance also seems to have increased as compared with the acceptance prior to the euthanasia law (Miccinesi et al., 2005). This could suggest that the euthanasia law has led to higher acceptance of the practice among physicians, either as a result of increased societal attention to and open discussion about euthanasia after its legalisation, but possibly also because physicians adapt their views about what they think is ethically permissible to what is legally permitted. The latter could be seen as one manifestation of so-called slippery slope effects of euthanasia legalisation (Norwood, Kimsma, & Battin, 2009; Pereira, 2011; van der Burg, 1992). Some authors have argued that the danger of euthanasia legalisation lies especially in a social slippery slope, ie that acceptance of one form of euthanasia will lead to acceptance of other, less acceptable, forms of assisted dying, eventually also resulting in an increased use. Our findings did indeed indicate a fairly high acceptance among Flemish and Walloon physicians of life-ending without explicit patient request (e.g. out of compassion), a level of acceptance that also seems to have gone up after legalisation (Miccinesi et al., 2005). Moreover, about three quarters of the Walloon physicians and more than 80% of the Flemish ones felt that the euthanasia law should be expanded to include patients who have become incompetent (e.g. due to dementia) and are in possession of an advance directive. It can thus not be ruled out that legalisation of a strictly defined form of euthanasia has led to higher acceptance of other forms of euthanasia. On the other hand, previously published data from large-scale studies in Belgium estimating frequencies of end-of-life decisions did not find an increase in the actual practice of life-ending without an explicit request or of an increased application in specific social (more vulnerable) groups (Bilsen et al., 2009; Chambaere, Bilsen, Cohen, Onwuteaka-Philipsen, et al., 2010). Most empirical data on actual practices in other countries where euthanasia or physician assisted suicide is legal similarly show an absence of such trends (Battin, van der, Ganzini, van der, & Onwuteaka-Philipsen, 2007; van der Heide et al., 2007). In addition to these claims of slippery slope effects, an often heard (albeit anecdotal) claim is that only a handful of physicians in Belgium are performing all euthanasia cases. Our results falsify this claim. Although there was one physician in our data who performed a relatively large number of euthanasia cases, there was still a reasonable spread of performed cases among different physicians in Flanders and Wallonia (about 14% of Flemish physicians and 8% of Walloon physicians responding to our survey reported having performed euthanasia in the 2 years preceding the survey).

Pereira (2011) claims to find evidence in the available data for Belgium that the legal safeguards of euthanasia are ineffective and

that many people who should not be euthanised according to the law are dying by those means. Our study confirms that legal safeguards (e.g. consultation of a second independent physician, reporting to the Control and Evaluation Committee) are indeed not followed in all cases of euthanasia and that not all physicians hold a positive attitude towards the necessity of these legal safeguards. However, our study also seems to suggest that this is much more driven by personal values and cultural differences between Flemish and Walloon physicians than by a desire to fool the law.

## Conclusion

We started out by noting that while French-speaking physicians care for roughly about 40% of dying patients, they account for only 17% of all officially reported euthanasia cases. This has given rise to speculation about cultural differences between Flanders and Wallonia in euthanasia practice, with the practice believed to be much more frequent in Flanders. Others have suggested that, as a result of the cultural differences between the regions, Walloon physicians are less inclined to adhere to the legal safeguards such as consulting a second physician and reporting a euthanasia case. Our study found truth in both positions. Walloon physicians less often grant a euthanasia request from a patient, but they also seem less inclined to adhere to legal safeguarding. Somewhat worrying is that Walloon physicians also have a less than adequate knowledge of which cases should be labelled as euthanasia and of which cases need to be reported to the Federal Control and Evaluation Committee for Euthanasia. It seems warranted, based on these findings, to develop information campaigns in Wallonia to better inform physicians and patients about the euthanasia law, as that seems to have been done more extensively in Flanders. However, with less than 50% of physicians in either region stating that they are sufficiently informed about the euthanasia law, campaigns in both regions may still be warranted. More generally, our findings seem to suggest that the influence of a euthanasia law on a particular society, and the extent to which legal safeguards are followed, is affected by the surrounding culture. Cultural values and sensitivities will determine the extent to which legalisation or a law is culturally transferrable. This may likely apply to several countries that would consider legalisation, in particular those that operate as 'federations'.

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